AMENDMENTS TO THE SPECIFICATION

At page 1, please amend the title as follows:

~~ASSAY FOR~~ **PREDICTING** ~~CELL ACTIVITY~~ **THE CAPACITY OF A CELL POPULATION TO INDUCE BONE FORMATION**

At page 5, please amend the paragraph starting at line 29 as follows:

It is also possible to detect ALP by allowing it to convert a substrate for the enzyme ALP and detecting formed reaction product. Suitable ~~substratea~~ substrates in this respect are para-nitro phenyl phosphate and ~~alpha-naphtol-AS-B1~~ alpha-naphthol AS-BI phosphate. Hydrolysis of the latter leads to the formation of a highly insoluble ~~naphtol~~ naphthol that may be coupled to a suitable diazonium salt that [[it]] is preferably present. A suitable example of such a diazonium salt is fast blue RR. The coupling provokes a ~~coulour~~ color reaction that can be detected by the naked eye or by UV. The reaction product obtained after conversion of para-nitro phenyl phosphate by ALP may be detected using ~~Sigma 104R~~ SIGMA 104® phosphatase substrate (Sigma-Aldrich, St. Louis, MO) and UV. When the substrate is para-nitro phenyl phosphate, the cells are preferably first subjected to lysis and sonification.

At page 10, please amend the paragraph starting at line 14 as follows:

Human bone marrow stromal cells were plated at a density of 5000 cell per ~~cm(superscript: 2)~~ cm^2 in 6 well plates (n=3) and cultured with and without dexamethasone for 7 days. After washing with PBS they were subjected to lysis and sonification. As substrate for ALP, para-nitro phenyl phosphate (PNP) was used (10 mM PNP in 1 ml diethanol amine and 1

mM magnesium chloride ($MgCl_2.6H_2O$) at pH 9.8). The reaction product was detected using ~~Sigma 104R~~ SIGMA 104® phosphatase substrate (52.6 mg) dissolved in 10 ml ALP buffer (10 ml 10M diethanol amine and 90 ml demi-water to which, after overnight incubation, 10.33 mg magnesium chloride ($MgCl_2.6H_2O$) was added). The pH was adjusted to 9.8 using 1N HCl. 100 µl of this substrate was added to 100 µl of the cell lysate for 15 minutes at 37°C. A yellow ~~colour~~ color change was observed in a plate reader at 405 nm. The results obtained were calibrated and adjusted for the amount of DNA in a known manner.

At page 12, please amend the paragraph starting at line 29 as follows:

Human bone marrow stromal cells were seeded at a density of 5000 cells per ~~cm(superscript: 2)~~ cm^2 in a T75 flask and cultured for 3-7 days in media with and without 1.25(OH)D3 (vitamin D3). After trypsinization the cells were blocked against nonspecific binding. Cells were then resuspended in FIX® solution A (fixation medium) (Caltag ~~laboratories~~ Laboratories, Burlingame, CA), incubated for 15 minutes and washed. A mixture 1:1 was made of PERM® solution B (permeabilization medium) (Caltag ~~laboratories~~ Laboratories, Burlingame, CA) and the osteocalcin mouse anti-human antibody (Zymed) dissolved in the blocking buffer (1:100 dilution). The cells were incubated for 15 minutes with the mixture. After incubation and washing, antibody reactivity was detected by suspending the cells with blocking buffer containing [[Goat]] goat anti-mouse FITC conjugated ~~F(ab')2~~ $F(ab')_2$ fragment (DAKO) (1:100 dilution) and incubating the cells for 30 minutes in the dark. After washing the cells were resuspended in FACS flow/staining and analyzed by a ~~FACS Calibur~~ FACSCalibur apparatus (~~Becton Dickenson~~ BD Biosciences Immunocytometry systems, Franklin Lakes NJ). For each event 10.000 events were collected.